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10/96 (USPN 5,856,462)

Listing of Claims:

1. **(previously presented)** A composition for inhibiting specific gene expression with reduced side effects, the composition comprising a modified CpG-containing phosphorothioate oligonucleotide that is complementary to a portion of a genomic region or gene for which inhibition of expression is desired, or to RNA transcribed from such a gene, wherein the modified CpG is selected from the group consisting of alkylphosphonate CpG, 2'-O-substituted CpG, stereospecific phosphorothioate CpG, phosphotriester CpG, phosphoramidate CpG, and 2'-5' CpG.
2. **(canceled)**
3. **(previously presented)** A method for providing a CpG-containing phosphorothioate oligonucleotide with reduced splenomegaly and reduced depletion of platelets to a mammal comprising administering to the mammal a composition according to claim 1, wherein the oligonucleotide is complementary to a gene that is being expressed in the mammal.
4. **(previously presented)** A method for providing a CpG-containing phosphorothioate oligonucleotide, with reduced side effects, to an individual with a disease caused by aberrant gene expression, the method comprising administering to an individual having the disease a composition according to claim 1, wherein the oligonucleotide is complementary to a gene that is aberrantly expressed, wherein such aberrant expression causes the disease.
5. **(previously presented)** A method for reducing side effects of a CpG-containing phosphorothioate oligonucleotide administered to a mammal, comprising:
 - (a) providing a CpG-containing phosphorothioate oligonucleotide having a CpG modification selected from the group consisting of alkylphosphonate CpG, inverted CpG, 2'-O-substituted CpG, stereospecific phosphorothioate CpG, phosphotriester CpG, phosphoramidate CpG, and 2'-5' CpG; and

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(b) administering the modified CpG-containing phosphorothioate oligonucleotide to the mammal, wherein administration of the modified CpG-containing phosphorothioate oligonucleotide results in fewer side effects than the administration of an unmodified CpG-containing phosphorothioate oligonucleotide.

Claims 6. – 15. (canceled)

What is claimed is:

1. A oligonucleotide for inhibiting specific gene expression with reduced side effects, the composition comprising a modified CpG-containing phosphorothioate oligonucleotide that is complementary to a portion of a genomic region or gene for which inhibition of expression is desired, or to RNA transcribed from such a gene, wherein the modified CpG is selected from alkylphosphonate CpG, inverted CpG, stereospecific phosphorothioate CpG, phosphotriester CpG, phosphoramidate CpG and 2'-5' CpG.
2. The oligonucleotide according to claim 1, wherein the modified CpG is a alkylphosphonate CpG.
3. The oligonucleotide according to claim 1, wherein the modified CpG is an inverted CpG.
4. The oligonucleotide according to claim 1, wherein the modified CpG is a stereospecific phosphorothioate CpG.
5. The oligonucleotide according to claim 1, wherein the modified CpG is a phosphotriester CpG.
6. The oligonucleotide according to claim 1, wherein the modified CpG is a phosphoramidate CpG.
7. The oligonucleotide according to claim 1, wherein the modified CpG is a 2'-5' CpG.